

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:

at a computer, dynamically binding an event context to an execution context in response to receiving events by:

storing, in a memory associated with the computer, arriving events into a global event queue that is accessible by event contexts;

storing, in the memory, events from the global event queue in per-execution context event queues; and

associating, at the computer, an event queue with the execution context to temporarily store events for the event context for a duration of the dynamic binding.

2. (Previously Presented) The method of claim 1 wherein the execution context can be in one of four states, idle, binding, bound, or unbinding.

3. (Original) The method of claim 1 wherein in the bound state, an execution context is bound to a specific event context and the execution context processes events for that event context and the event queue associated with that execution context is used to store events for the event context to which it is bound.

4. (Original) The method of claim 1 wherein in the unbinding state, the execution context determines if it has any more events to process for the event context to which it was bound and either unbinds itself from the event context, going to idle state or begins processing another event from that context, going back to bound state.

5. (Original) The method of claim 1 wherein in the event context can be in one of two states, unbound or bound.

6. (Currently amended) The method of claim 1 wherein a global FIFO event queue is used to queue events when the events first arrive into [[the]] a system.

7. (Original) The method of claim 1 further comprising:  
maintaining execution contexts in an idle state until an event arrives at a head of the global event queue.

8. (Previously Presented) The method of claim 1 wherein upon receiving an event, the method further comprises:

assigning an execution context that is in idle state to process a packet.

9. (Previously Presented) The method of claim 1 wherein binding an execution further comprises:

removing an event from the events for the event context in the event queue;  
determining the event context; and  
determining if the event context to which a packet belongs is already bound to an execution context.

10. (Original) The method of claim 9 wherein if the event context is already bound, binding an execution further comprises

placing the packet in the event queue of the other execution context to which the event context associated with the packet is already bound to;  
unbinding the event context; and  
returning to an idle state.

11. (Original) The method of claim 10 wherein if the event context is not already bound, binding an execution further comprises:

binding the execution context to that event context by updating a state of the execution context from idle to bound, updating the state of the event context from “not bound” to bound, and recording that this execution context is bound to this event context; and  
processing the event.

12. (Previously Presented) The method of claim 11 wherein when the execution context completes processing the event, the execution context transitions to an unbinding state.

13. (Previously Presented) The method of claim 12 wherein when the execution context completes processing the event, the execution context checks its event queue for additional events to process;

14. (Previously Presented) The method of claim 12 wherein if there is at least one event in the event queue, the execution context returns to the bound state, removes the packet from the event queue and processes the packet, otherwise the execution context unbinds itself from the event context, and transitions to an idle state.

15. (Original) The method of claim 1 wherein the events are packets.

16-26. (Canceled)

27. (Previously Presented) A computer program product residing on a computer readable medium for dynamically binding an event context to an execution context in response to receiving events comprising instructions for causing a processor to:

store events into a global event queue that is accessible by event contexts;  
store events from the global event queue in per-execution context event queues; and  
associate a FIFO event queue with the execution context to temporarily store events for the event context for a duration of the dynamic binding.

28. (Original) The computer program product of claim 27 further comprising instructions to:

maintain execution contexts in an idle state until an event arrives at a head of the global event queue.

29. (Previously Presented) The computer program product of claim 27 wherein upon receiving an event, the method further comprises instructions to:

assign an execution context that is in idle state to process a packet.

30. (Currently Amended) The computer program product of claim 27 wherein instructions to bind an execution further comprises instructions to:

remove an event from the events for the event context in the event queue;

determine a event context; and

determine if the event context to which ~~this~~ a packet belongs is already bound to an execution context.

31. (Currently Amended) The computer program product of claim 27 wherein if the event context is already bound, instructions to bind an execution further comprises instructions to:

place ~~the~~ a packet in a FIFO event queue of the other execution context to which the event context associated with the packet is already bound to;

unbind the event context; and

return to an idle state.

32. (Previously Presented) The computer program product of claim 27 wherein if the event context is not already bound, instructions to bind an execution further comprises instructions to:

bind the execution context to that event context by updating a state of the execution context from idle to bound;

update the state of the event context from “not bound” to bound;

record that this execution context is bound to this event context; and process an event.

33-41. (Canceled)

42. (Currently amended) Apparatus A computer system comprising:  
a processor including multiple processing engines, each processing engine including multiple event contexts;  
circuitry to dynamically bind an event context to an execution context in response to receiving an event;  
a global event queue that is accessible by all event contexts to store arriving events;  
per-execution context event queues to store events from the global event queue; and  
a FIFO event queue to temporarily store events for that event context for a duration of the binding.

43. (Currently amended) The apparatus of claim 42 wherein the global event queue is used to queue events when the events first arrive into the computer system.

44-51. (Canceled)